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In the United States Patent and Trademark Office



Application Number: 10/039,821

Appn. Filed: 01/04/2002

Applicant(s): Sutula, Daniel P. Jr

Appn. Title: Method and apparatus for precisely fitting, reproducing, and creating 3-dimensional objects from digitized and/or parametric data inputs using computer aided design and manufacturing technology

Examiner/GAU: Charles R. Kasenge 2125

Mailed: April 20, 2006

At: Simsbury, CT

Amendment

Commissioner of Patents and Trademarks
Washington, District of Columbia 20231

Sir:

In response to the Office Action dated January 20, 2006, the applicant/inventor respectfully contests the basis for rejections and provides the following explanations, evidence, and arguments. The applicant/inventor has revised and is resubmitting the "Amendments to the claims".

REMARKS – GENERAL

With respect to the office's reference and rejection in lieu of Hull's Patent 6,027,324, the applicant provides the following arguments against its relevance. Hull's invention pertains to the now common method of producing parts via "stereolithography".

Stereolithography is an "additive" rapid prototyping process wherein a part is selectively

solidified and thus created from a vat of liquid polymer. The stereolithography process requires a finite but large number of steps to create a part in a thin-layer by thin-layer in increments of approximately .0005-.005 inches. In contrast, with the exception of pending claim 14, this invention pertains to a predominantly “subtractive” method of producing a part, wherein the part is ultimately machined from an existing oversized stock or blank. The use of profiles and parameters comprises part of the “reverse engineering” required to recreate an approximate CAD model representation of the part. In other words, going from the physical part to a virtual model. Hulls utilizes profiles and parameter as a result of “slicing” a virtual CAD model into a finite number of layers in order to build or recreate it as a physical part.

Thus, the reference to Hull is only relevant with respect to the pending claim number 14, “14. The method of claim 1 wherein step 6 comprises a CNC controlled Rapid Prototyping machine capable of directly producing a part”, wherein Hull’s Invention could be utilized in one step of the process.

Similarly, the applicant finds the reference to Kinzie’s U.S. Patent 5,997,681, which comprises another “additive” method of prototyping, not relevant.